



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/615,859	07/09/2003	Stephen Reif	0308.67399	9977
24978	7590	12/07/2004		
GREER, BURNS & CRAIN 300 S WACKER DR 25TH FLOOR CHICAGO, IL 60606			EXAMINER CINTINS, IVARS C	
			ART UNIT 1724	PAPER NUMBER

DATE MAILED: 12/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/615,859

Applicant(s)

REIF, STEPHEN

Examiner

Ivars C. Cintins

Art Unit

1724

*[Handwritten signature]*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. ____   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>20 October 2003</u> .   | 6) <input type="checkbox"/> Other: ____                                     |

Art Unit: 1724

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Janke et al. (U.S. Patent No. 5,234,601) in view of Zabinski (U. S. Patent No. 5,699,272), further particularly in view of Teel (U.S. Patent No. 6,783,684). Janke et al. discloses measuring the conductivity at spaced locations in a resin bed in order to determine the presence of a regenerant in the bed, and sending a warning signal to the user if its presence is not detected (see col. 2, lines 55-58). This reference further teaches the use of visual and audible alarms (see col. 5, lines 59 and 63). Accordingly, Janke et al. discloses the claimed invention with the exception of the recited impedance measurements. Zabinski discloses a similar water softening system, and teaches using impedance measurements to determine the composition of a liquid in the treatment bed. It would have been obvious to one of ordinary skill in the art at the time the invention was made to substitute the impedance measuring elements of Zabinski for the conductivity measuring elements in the Janke et al., since these secondary reference impedance measuring elements are capable of determining the presence of regenerant solution (i.e. brine) in the resin bed of the primary reference in substantially the same manner as the conductivity measuring elements of this primary reference, since the conductivity and impedance of a brine solution are related, as evidenced by Teel (see col. 7, lines 20-24). Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ 99 minutes (claims 4 and 7) as the

Art Unit: 1724


preset time period in the system of the modified primary reference, as further suggested by Zabinski (see col. 5, lines 23-28).

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zabinski in view of Janke et al. or Teel. Zabinski discloses the claimed invention with the exception of the recited alarm. Janke et al. and Teel each disclose water softening systems having an alarm to indicate a problem. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Zabinski with the audible or visual alarm of either secondary reference, in order to warn a user that a problem has occurred. Such a modification is deemed to be especially obvious since Zabinski discloses shutting off the system if an aberration occurs (see col. 5, lines 27-28).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to I. Cintins whose telephone number is (571) 272-1155. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Duane Smith, can be reached at (571) 272-1166.

The centralized facsimile number for the USPTO is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ivars C. Cintins  
Primary Examiner  
Art Unit 1724

I. Cintins  
December 5, 2004